

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for inspecting a head unit moving device, the method comprising the steps of:

running an inspection use tape in which a servo signal is written ~~so as to meander;~~
~~displaced~~ in a width direction of ~~a magnetic tape~~ said inspection use tape and is displaced at a predetermined frequency and amplitude;

measuring a position of a head unit practically moved in a width direction of said inspection use tape in response to said servo signal; and

calculating a difference between the position and a position to be instructed ~~so as to move~~ said head unit in response to said servo signal,

wherein said head unit moving device moves said head unit having a servo signal reading head, a data signal recording head, and a data signal reproducing head in the width direction of said ~~magnetic tape~~ inspection use tape in response to said servo signal read from said ~~magnetic tape~~ inspection use tape by said servo signal reading head.

2. (currently amended): A manufacture method of an inspection use tape, used for an inspection of a magnetic tape drive, comprising:

displacing a servo signal writing head in a width direction of a magnetic tape; and

writing a servo signal in ~~a~~ said magnetic tape so as to meander in a width direction of said magnetic tape at a predetermined frequency and amplitude,

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 10/727,046 (Q78736)

wherein the servo signal is written in said magnetic tape by said servo signal writing head, thereby constituting the inspection use tape.

3. (currently amended): A manufacture method of an inspection use tape, used for an inspection of a magnetic tape drive, comprising:

displacing a servo signal writing head in a width direction of a magnetic tape; and
writing a servo signal in ~~a~~said magnetic tape so as to meander in a width direction of said magnetic tape at a predetermined amplitude and different frequencies,

wherein the servo signal is written in said magnetic tape by said servo signal writing head, thereby constituting the inspection use tape.

4. (currently amended): A manufacture method of an inspection use tape according to claim 2, the manufacture method comprises:

disposing a tape edge detector ~~detecting~~which detects a position of a tape edge of said magnetic tape directly near said servo signal writing head, wherein said servo signal writing head is displaced in the width direction of said magnetic tape so as to cancel out variations in the width direction of said magnetic tape, based on an inspection result of said tape edge detector.

5. (currently amended): A manufacture method of an inspection use tape according to claim 3, the manufacture method comprises:

disposing a tape edge detector ~~detecting~~which detects a position of a tape edge of said magnetic tape directly near said servo signal writing head, wherein said servo signal writing head

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appl. No. 10/727,046 (Q78736)

is displaced in the width direction of said magnetic tape so as to cancel out variations in the width direction of said magnetic tape, based on an inspection result of said tape edge detector.

6. (previously presented): An inspection use tape manufactured by the manufacture method of the inspection use tape according to claim 2.

7. (previously presented): An inspection use tape manufactured by the manufacture method of the inspection use tape according to claim 3.

8. (previously presented): An inspection use tape manufactured by the manufacture method of the inspection use tape according to claim 4.

9. (previously presented): An inspection use tape manufactured by the manufacture method of the inspection use tape according to claim 5.

10. (currently amended): A magnetic tape drive head unit moving device,
comprising:

a device reel;

a device reel driving device which rotationally ~~driving~~drives said device reel;

a tape reel driving device which rotationally ~~driving~~drives a tape reel;

a head unit having a servo signal reading head ~~reading~~which reads a servo signal written
in an inspection use tape;

an optical sensor ~~detecting~~which detects a position of said head unit; and

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appl. No. 10/727,046 (Q78736)

a responsivity inspecting circuit ~~inspecting-which inspects~~ a responsivity of the head unit by calculating a difference between a position to be instructed so as to move the head unit in response to a servo signal read from said inspection use tape and a position detected by said optical sensor,

wherein said position detected by said optical sensor is continuously monitored such that said head unit continuously tracks said servo signal.

11. (currently amended): ~~A servo writer to implement the manufacture method of the inspection use tape according to claim 2, which is equipped with~~ The manufacture method of the inspection use tape according to claim 2, wherein the inspection use tape is manufactured within a servo writer, which comprises:

a supply reel ~~supplying-which supplies~~ a magnetic tape;;
a winding reel ~~winding-which winds~~ the magnetic tape supplied from the supply reel;;
a winding reel driving device ~~driving-which drives~~ the winding reel;;
a servo signal writing head ~~writing-which writes a said~~ servo signal in said magnetic tape;
; and

a head moving device ~~displacing-which displaces~~ said servo signal writing head in the width direction of said magnetic tape at a said predetermined frequency and amplitude.

12. (currently amended): ~~A servo writer to implement the manufacture method of the inspection use tape according to claim 3, which is equipped with~~ The manufacture method of the inspection use tape according to claim 3, wherein the inspection use tape is manufactured within a servo writer, which comprises:

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appl. No. 10/727,046 (Q78736)

a supply reel ~~supplying~~ which supplies a magnetic tape;₁

a winding reel ~~winding~~ which winds the magnetic tape supplied from the supply reel;₂

a winding reel ~~driving~~ which drives device driving the winding reel;₃

a servo signal writing head ~~writing~~ which writes said servo signal in said magnetic tape;₄

and

a head moving device ~~displacing~~ which displaces said servo signal writing head in the width direction of said magnetic tape at a said predetermined amplitude and different frequencies.

13. (currently amended): ~~A servo writer according to claim 11 which is equipped with~~ The manufacture method of an inspection use tape according to claim 11, wherein said servo writer further includes a tape edge detector ~~detecting~~ which detects a position of a tape edge of said magnetic tape directly near said servo signal writing head,

wherein said head moving device displaces said head unit so as to cancel out variations of the width direction of said magnetic tape based on a detection result detected by said tape edge detector.

14. (currently amended): ~~A servo writer according to claim 12 which is equipped with~~ The manufacture method of an inspection use tape according to claim 12, wherein said servo writer further includes a tape edge detector ~~detecting~~ which detects a position of a tape edge of said magnetic tape directly near said servo signal writing head,

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appl. No. 10/727,046 (Q78736)

wherein said head moving device displaces said head unit so as to cancel out variations of the width direction of said magnetic tape based on a detection result detected by said tape edge detector.

15. (previously presented): A servo writer of an inspection use tape according to claim 11, wherein a head moving device is a piezoelectric element.

16. (previously presented): A servo writer of an inspection use tape according to claim 12, wherein a head moving device is a piezoelectric element.

17. (previously presented): A servo writer of an inspection use tape according to claim 13, wherein said head moving device is a piezoelectric element.

18-22. (canceled).

23. (currently amended): A method for inspecting a head unit moving device according to claim 1, wherein the servo signal reading head of the head unit reads the servo signal and generates a read signal that is output to a control unit and a responsivity circuit, and wherein the head unit is moved in the width direction of the inspection use tape and the head unit adjusts positions of the data signal recording head and the data signal reading head in corresponding data bands of the inspection use tape.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appl. No. 10/727,046 (Q78736)

24. (currently amended): A method for inspecting a head unit moving device according to claim 1, wherein the servo signal is written ~~displaced~~ on the magnetic tape, displaced at the predetermined frequency in the width direction of the magnetic tape.

25. (previously presented): A method for inspecting a head unit moving device according to claim 1, wherein the servo signal is a time-based servo signal comprising a bottom-open-reverse-V shape pattern.

26. (previously presented): A manufacture method of an inspection use tape according to claim 2, wherein the servo signal is a time-based servo signal comprising a bottom-open-reverse-V shape pattern.

27. (previously presented): A manufacture method of an inspection use tape according to claim 3, wherein the servo signal is a time-based servo signal comprising a bottom-open-reverse-V shape pattern.

28. (previously presented): A method for inspecting a head unit moving device according to claim 25, wherein the bottom-open-reverse-V shape pattern comprises a plurality of pattern lines, each of the plurality of pattern lines has a linear slope.

29. (previously presented): A manufacture method of an inspection use tape according to claim 26, wherein the bottom-open-reverse-V shape pattern comprises a plurality of pattern lines, each of the plurality of pattern lines has a linear slope.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appl. No. 10/727,046 (Q78736)

30. (previously presented): A manufacture method of an inspection use tape according to claim 27, wherein the bottom-open-reverse-V shape pattern comprises a plurality of pattern lines, each of the plurality of pattern lines has a linear slope.

31. (new): A method for inspecting a head unit moving device according to claim 1, wherein said servo signal is written to meander within a single servo band.

32. (new): A method for inspecting a head unit moving device according to claim 31, wherein said servo signal is displaced at said predetermined frequency and amplitude across a width of said single servo band.